

Critical Impact of the UNE Decision on the Fiber Optics Industry

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CORNING

Discovering Beyond Imagination

Agenda

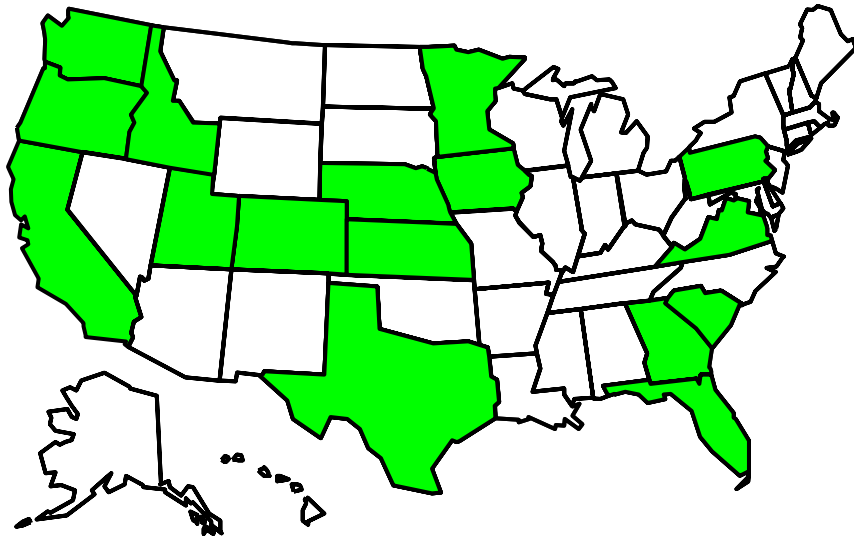
- Criticality of UNE Decision
- FTTH Technology is Viable Today
- Impact of Unbundling Relief on FTTH Deployment
- Corning's Policy Recommendations
- Legal Authority to Implement
- UNE-P Relief is Necessary

Criticality of UNE Decision

- U.S. fiber industry in a severe depression:
 - 75% of workers laid off
 - 3 of 6 factories in North America closed
 - Sales volume down 68%
 - Industry capitalization down 90%
- We are losing our lead in the technology:
 - We've lost the lead to Japan
 - China closing in
 - Corning now the only U.S.-owned fiber and photonic components manufacturer
- Right decision in UNE Review will reverse these negative trends

FTTH is Viable

List of U.S. FTTH Communities*



Alberta, MN
Almena, KS
Avery Ranch, TX
Bear Creak, ID
Braemer-Bristow, VA
Burleson, TX
Cambridge, IA

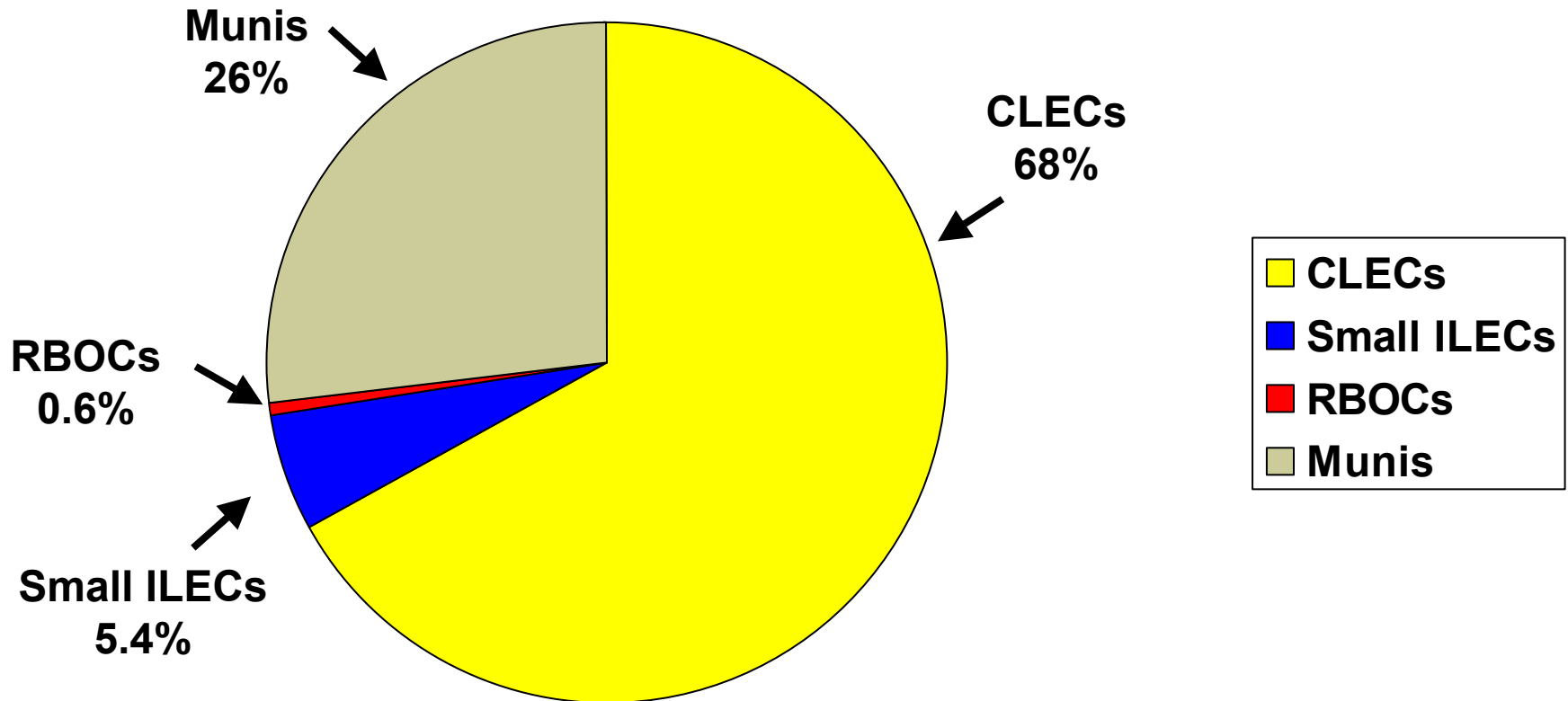
Canyon Gate, TX
Chelan County, WA
Chokio, MN
Colorado City, CO
Crystal Falls, TX
Daniel Island, SC
Douglas County, WA

Dunwoody, GA
East Ottertail, MN
Evermore, MN
Grand Lake, TX
Grant County, WA
Blair, NE
Guthrie Center, IA
Hill City, KS
North Richland, TX
Huxely, IA
Issaquah Highlands, WA
Kamas, UT
Kutztown, PA
Lakes on Eldridge, TX
Lansdowne, VA
Laredo, TX
Daytona Beach, FL

Mason County, WA
Morris, MN
Houston, TX (x3)
Norton, KS
Osborne, KS
Palo Alto, CA
Poppy Meadows, CA
Provo, UT
Roseville, CA
Rye, CO
Sacramento, CA
Bluffton, SC
Slater, IA
Broadlands, VA
Albertville, MN
Woodburn, OR

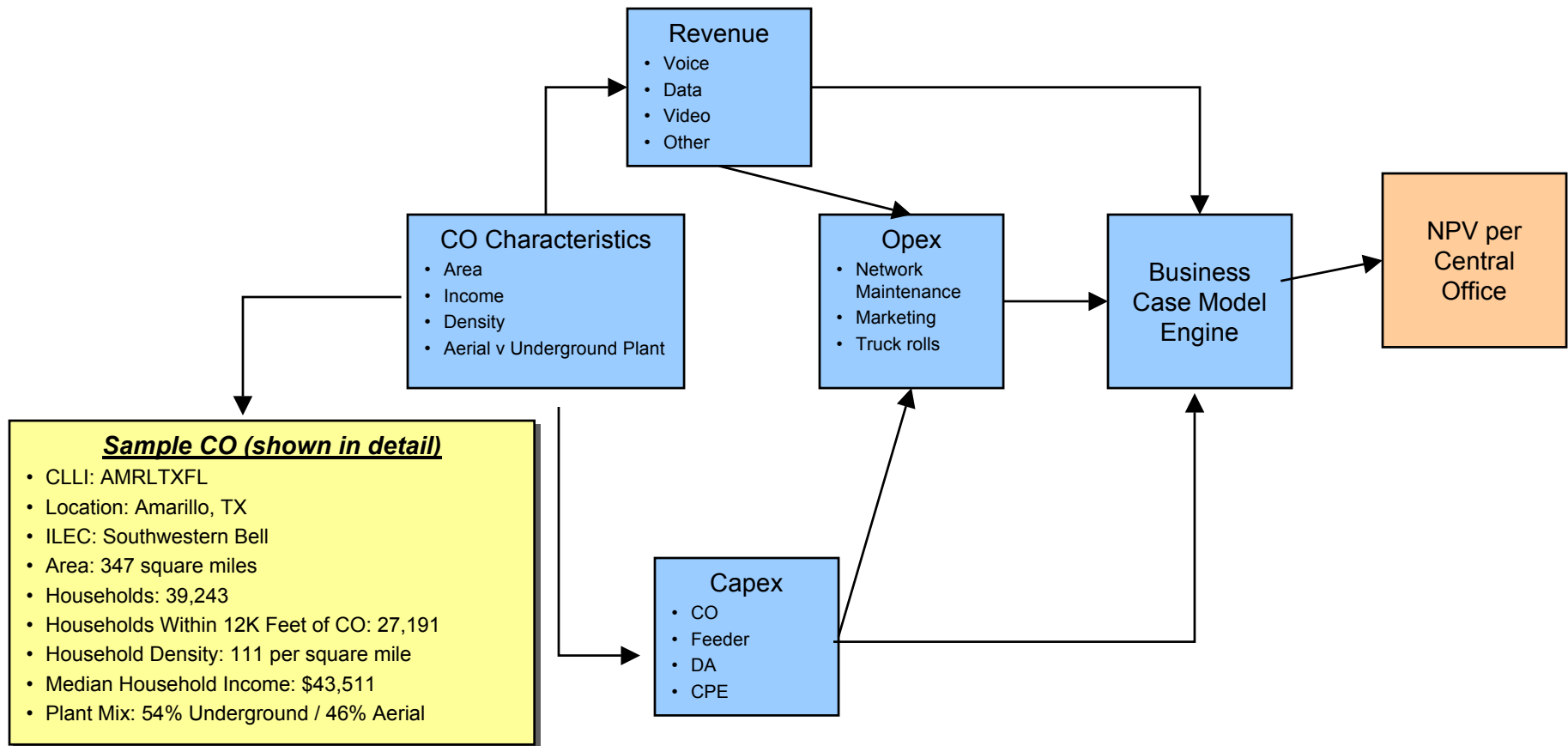
* many more in construction and pre-construction phases

Impact of Unbundling Relief on FTTH Deployment - *Homes Passed by FTTH*



Source: Corning Incorporated and "Fiber to the Home and Optical Broadband 2002", Render, Vanderslice & Associates (presented at the Fiber-to-the-Home Conference, New Orleans, LA, October 15, 2002), p. 80.

Impact of Unbundling Relief on FTTH Deployment - CSMG Model

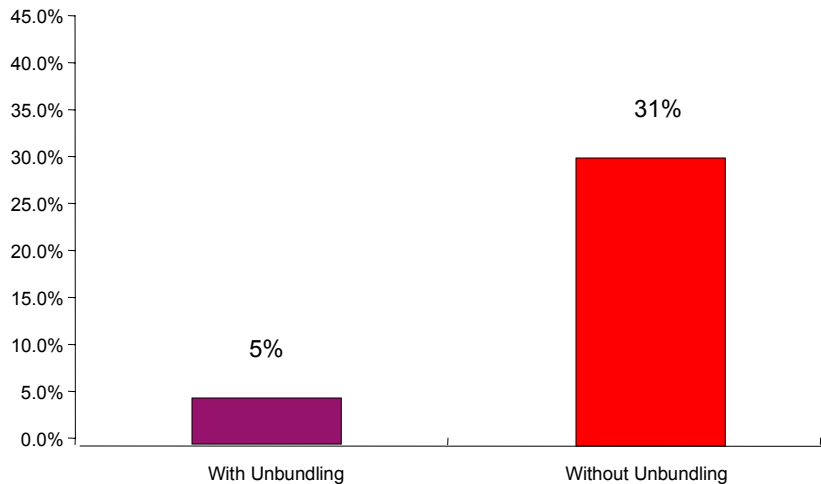


Source: Cambridge Strategic Management Group, *Assessing the Impact of Regulation on Deployment of Fiber to the Home: A Comparative Business Case Analysis ("CSMG Analysis")* (Apr. 5, 2002), p. 18, attached as exhibit I to Comments of Corning Inc., *Review of the Section 251 Unbundling Obligations of the Incumbent Local Exchange Carriers*, CC Docket No. 01-338 (filed Apr. 5, 2002).

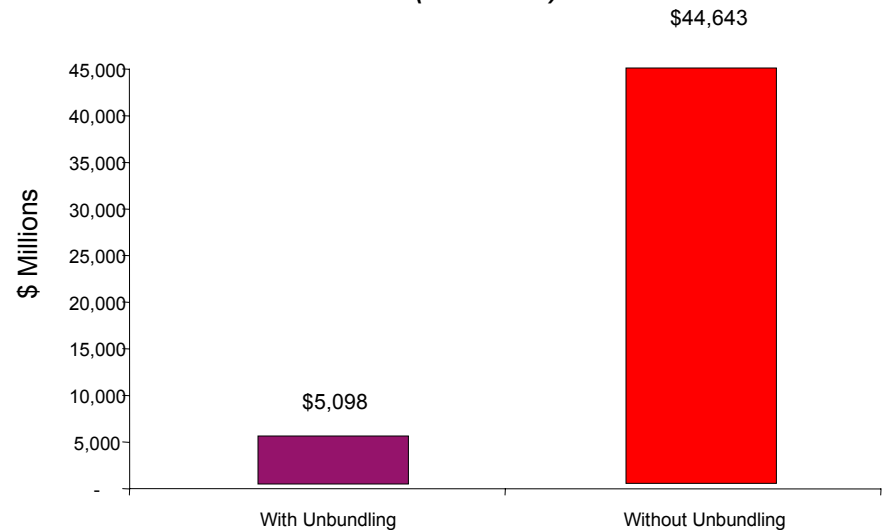
Impact of Unbundling Relief on FTTH Deployment- CSMG Results

- Unbundling relief will increase FTTH deployment by a factor of 6.2

**Percent of Households Able to Purchase FTTH in 2013
(Addressable)**



**Cumulative FTTH Capital Expenditures
(2003-2013)**



Source: Ibid, Slide no. 7, pp. 12-13.

Corning's Policy Recommendations

- Relieve FTTH from the unbundling requirement in Section 251(c)(3)
- Relieve ILECs of obligation to deploy copper in “new build” situations
- Give ILECs the option of retiring/selling the copper plant where FTTH is deployed
- Preempt state authority to alter the unbundling requirements

Corning's Policy Recommendation

Our Proposal is Reasonable

- Our proposal should not adversely affect the CLECs:
 - CLECs have demonstrated that they can self-provide FTTH
 - Our proposal is a very narrow exception applying only to residential service, a market of little interest to most CLECs
 - CLECs can continue to use re-sale, a means that many CLECs use to serve residential customers
 - CLECs can continue to have unbundled access to existing copper facilities where FTTH is not deployed (an estimated 95% of the network in 2005)

Corning's Policy Recommendation

Other Supporters

- Fiber to the Home Council
- Atlantic Engineering Group
- Ciena Corporation
- Iamba Networks, Inc.
- Paceon
- Pirelli Communications Cables and Systems North America
- Eagle Broadband
- ZERO dB

Legal Argument

- In D.C. Circuit terms, with FTTH ILECs enjoy no bottleneck-related cost advantage
- With FTTH, ILECs have no cost advantage because they can't leverage legacy facilities
- Lack of access to fiber in the loop will not “impair” a CLEC's ability to provide service
- FCC regs (Section 51.317(b)(i)) — FCC will find impairment if lack of access “materially diminishes” a requesting carrier's ability to provide service, taking into account:
 - Alternative elements outside the incumbent's network
 - **Degree of self-provisioning by the requesting carrier** (emphasis added)
 - Alternative access from a third party

Legal Argument

- CLECs have demonstrated their ability to “self-provide” fiber to the home

	Homes Passed by FTTH	Percent of Total
CLECs	48,195	68.0%
Small ILECs	3,010	4.2%
RBOCs	428	0.6%
Munis	18,489	26%
Total	<hr/> 71,222	<hr/> 100%

Source: Ibid, Slide no. 6.

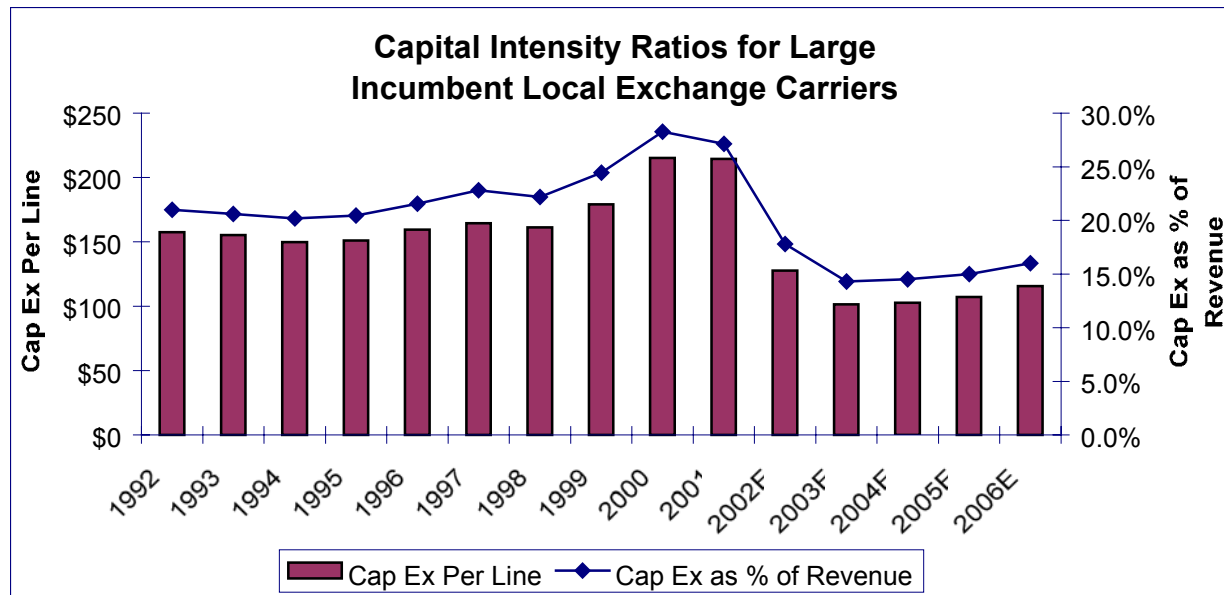
UNE-P Needs Reform

- Even if Corning's proposals are adopted, it is unclear whether the ILECs will invest in FTTH
- One reason for the reluctance to invest is the fact that UNE-P reduces earnings, free cash flow, and stock prices

UNE-P Needs Reform

Negative Impact on Carrier Investment

- The sharp decline in ILEC CAPEX began in 2002 when UNE-P access lines reached 11MM access lines or 7.2% of the market



Source: FCC ARMIS Reports for 1992 – 2001. Estimates for 2002-2006 from J. Parmelee, Telecom Equipment - Wireline Update, Credit Suisse First Boston, September 26, 2002

UNE-P Needs Reform

Possible UNE-P Solutions

- Remove switching from the UNE-P list
- Transition UNE-P to resale or a negotiated access
- But, don't substitute UNE-P with some other uneconomic obligation (e.g., removing the restriction on conversion of special access to UNEs)

Conclusions

- The U.S. fiber optics industry is in a severe depression and FCC can advance recovery in UNE proceeding
- Corning recommends relieving FTTH from the unbundling rules and allowing ILECs to retire/sell copper plants where FTTH is deployed
- The CSMG study shows that FTTH deployment will increase by a factor of 6 if FTTH is relieved from the unbundling rules
- UNE-P relief is necessary to give the ILECs the financial resources to invest